

REMARKS

The Examiner required new drawings as the current drawings contain handwriting. New drawings are being prepared and will be submitted as they are available.

Claims 1 and 2 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In particular, the Examiner pointed out that Claim 1 is inconsistent as it recites both “the volume of cells or particles” and “the volume of the liquid.” Claims 1 and 2, among Claims 3-5 and 7, have been amended to correct some inaccuracies.

Claims 1-2 and 4 have been rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by U.S. Patent No. 6,633,369 to Berndt (“Berndt”). Claims 3, 5-7 have been rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Berndt in view of U.S. Patent No. 3,675,768 to Legorreta-Sanchez (“Legorreta-Sanchez”). Reconsideration of these claims is respectfully requested.

Berndt discloses an optical cuvette having a stiff input window (1) and a flexible output window (3), with a region containing a weakly absorbing red blood cell (13), and another region containing no cells. The arrows (14) and (15) illustrate the stream of photons traversing the sample, whereby the decrease in width is meant as an indication of the decreasing light intensity as a result of light absorption within liquid portion (12) of the sample. Col. 4, lines 20-28.

Contrary to the assertion of the Examiner with respect to Claim 1, Berndt does not teach or suggest that suspending the cells or particles in a liquid medium that is fluorescent, and optically measuring the fluorescing liquid medium that is displaced by the cells or particles. As discussed above, Berndt teaches an absorbing dyes, which is in sharp contrast to the method recited in amended Claim 1 which calls for a liquid medium that is fluorescent.

The incorporation of a liquid medium that is fluorescent is an important feature of the invention. Using fluorescence-based systems is advantageous since both the particle size and very sensitive fluorescence at different wavelengths – all excited by one optical source, can be determined.

Claim 2 and new Claim 8 depend on Claim 1 and are patentable for the same reasons as Claim 1 and by reason of the additional limitations called for therein.

Claim 4 is patentable for reasons similar to Claim 1 by calling for a method that includes suspending the cells or particles in a liquid medium that is strongly fluorescent and irradiating a predetermined volume of the liquid medium to cause the liquid medium to fluoresce and emit light. As discussed above, Berndt does not disclose a liquid medium that is fluorescent.

Legorreta-Sanchez discloses valves 43 and 44 that are opened in response to a cell passing through the aperture 50 which has a volume or diameter between two predetermined limits. These limits are adjustable by adjusting the discriminators 70 and 71. Depending on the size of the cell, it is either sucked in by the conduit 38 or by the conduit 40 and eventually deposited into either flask 34 or 35. On the other hand, if the volume of the cell is outside of the predetermined limits, the cell is discarded and eventually collected in flask 26. Those cells are the normal cells which are of no further interest. Col. 9, lines 24-35.

Claim 3 calls for a method that includes forming a suspension of cells or particles in a liquid medium that is strongly fluorescent.

Contrary to the assertion of the Examiner, even if Berndt and Legorreta-Sanchez are combined in the manner suggested by the Examiner, neither of such references disclose a liquid medium that is fluorescent. Accordingly, the rejection of Claim 3 under 35 U.S.C. §103(a) should be withdrawn.

Claim 5 is patentable for reasons similar to Claim 3 by calling for a method that includes preparing a liquid medium with a strongly fluorescent dye.

Claim 6 depends from Claim 5 and is patentable for the same reasons as Claim 5 and by reason of the additional limitations called for therein.

Claim 7 is patentable for reasons similar to Claim 3 by calling for a method that includes flowing a liquid medium having a strongly fluorescent dye past a predetermined volume whereby the liquid medium limits light of a predetermined intensity in the absence of particles or cells of said volume.

Applicants have carefully reviewed the other references cited but not relied upon by the Examiner, including U.S. Patent Nos. 6, 714,287, 6,717,657, 6,359,683, and 4,348,112. Applicants respectfully submit that none of the cited references teach or suggest the method recited in the instant claims.

In view of the foregoing, it is respectfully submitted that the claims of record are allowable and that the application should be passed to issue. Should the Examiner believe that the application is not in a condition for allowance and that a telephone interview would help further prosecution of this case, the Examiner is requested to contact the undersigned attorney at the phone number below.

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Respectfully submitted,

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